

Claim listing

Please enter the amendments to the following claim listing, which replaces all prior claim listings.

1 - 82 (Canceled)

83. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 92 82, wherein the encoding of the beads is with color.

84. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 92 82 wherein the polymer formed by polymerization is hydrophilic.

85. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 92 82, wherein the biomolecules are ligands or receptors.

86. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 85 82, wherein ligands are peptides, proteins, nucleic acids (including DNA and RNA) or oligonucleotides.

87. (canceled)

88. (Currently Amended) The ~~polymer-bead assembly~~ of claim 93 87, wherein the substrate is a silicon chip.

89. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 92 82, wherein the beads have an average diameter of 0.5 um to 100 um.

90. (Canceled)

91. (Currently Amended) The ~~polymer-bead-assembly~~ method of claim 92 82, wherein the beads include magnetic beads.

92. (Newly Added) A method of forming an assembly of encoded beads embedded in a gel, wherein beads in the assembly are encoded with different labels, and wherein differently labeled beads have different biomolecules displayed on their surfaces and the labeling indicates the type of biomolecule displayed on particular beads and the type of analyte said biomolecule is capable of binding with, comprising:

providing a polymerization mixture including the encoded beads and polymerizable components;

confining the mixture between two opposing planar surfaces; and

triggering polymerization of the polymerizable components to thereby form the gel embedded bead assembly.

93. (Newly Added) The method of claim 92, wherein the gel embedded bead assembly is formed on a substrate.

94. (Newly Added) The method of claim 92, wherein the separation of the opposing planar surfaces defines the thickness of the gel embedded bead assembly.

95. (Newly Added) The method of claim 92, wherein the polymer formed by polymerization is permeable to macromolecules.

96. (Newly Added) The method of claim 93, wherein the gel embedded bead assembly formed through polymerization is self-supporting and can be removed from the substrate.